



## C24"FC" SERIES FULL CASED EVAPORATOR UNITS — UP-FLO AIR-CONDITIONING ONLY

1 To 5 Tons (4 To 18 kW) Nominal Cooling Capacity

# C24FC

Bulletin #490\*\*\*

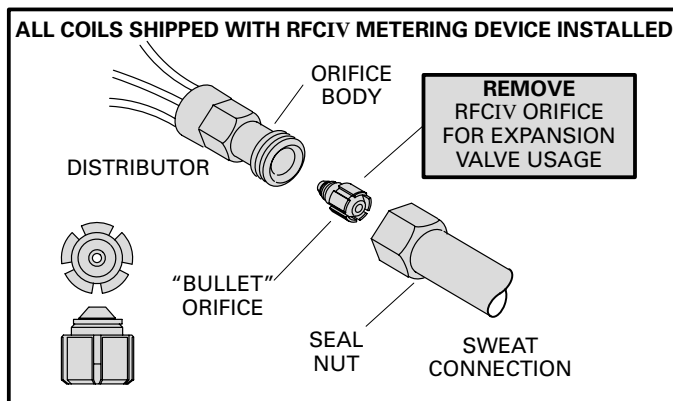
November 1993

**Applications** — Lennox designed and built up-flo evaporator coils can easily be installed with most Lennox up-flo furnaces. Full cased coils match plenum openings of most Lennox furnaces. See Coil/Furnace Match-up Selector table in this bulletin. See condensing units bulletins (section Cooling Units — Condensing Units) for evaporator unit applications and cooling capacities.

**Cabinet Construction** — Cabinets are fully insulated with thick fiberglass insulation and are constructed of heavy gauge steel with a deluxe baked-on enamel paint finish. Bend-up flanges are provided in outlet opening of cabinet for ease of plenum connection in conventional up-flo furnace applications and ease of alignment with B24 series blower units. See dimension drawing.

**Coil Construction** — Lennox designed and fabricated coils are constructed of precisely spaced ripple-edged enhanced aluminum fins machine fitted to rifled copper tubes. Lanced fins allow for maximum exposure of fin surface to air stream. Copper tubing construction provides long coil life and ease of service. Rifled tubing provides superior refrigerant flow resulting in maximum heat transfer. Twin coils assembled in an "A" configuration provides extra large surface and contact area for maximum efficiency. Fins have collars that grip tubing for maximum contact area resulting in excellent heat transfer. Flared shoulder tubing joints and silver soldering provide tight leakproof joints. Coils are thoroughly tested under pressure to insure leakproof construction. Drainpan is constructed of a non-corrosive polymer and has dual 3/4 inch (19 mm) fpt drain connections. Two-piece end panel allows easy access for coil servicing and cleaning. Refrigerant lines are equipped with sweat connections on suction and liquid lines.

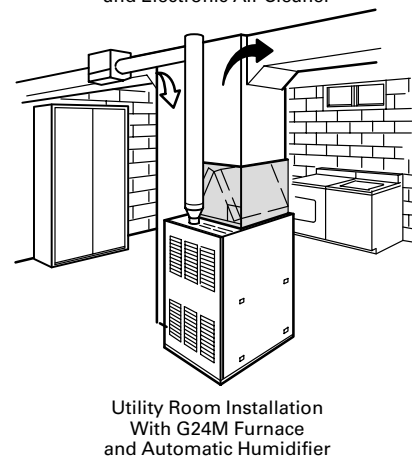
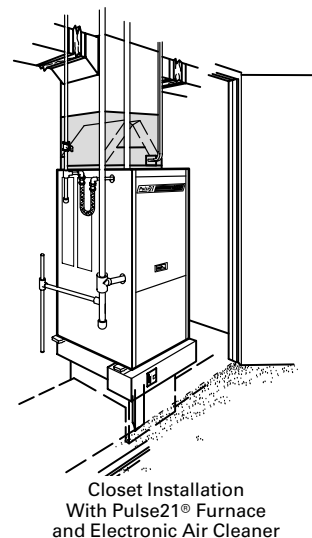
**Fully Tested** — Evaporator units have been thoroughly tested with matching condensing and heat pump units in the Lennox Research Laboratory environmental test room. Air resistance data is from tests conducted in the Lennox air test chamber. Full cased coils are shipped factory assembled and ready for installation.



**Refrigerant Control Choice** — Coils are shipped with factory installed RFCIV refrigerant metering device. An alternate choice is to select an optional expansion valve for a more efficient capacity rating. For expansion valve usage, coils must be field altered by removing the RFCIV metering orifice, see sketch above. Expansion valve kits are optional and must be ordered extra. See condensing unit bulletins in tab section, Cooling Units — Condensing Units for valve selection.

**Refrigerant Flow Control IV** — All models are applicable to Lennox RFCIV™ systems. RFCIV is a very accurate means of metering refrigerant in system. Refrigerant control is accomplished by the exact sizing of a refrigerant metering orifice. The principle of the Lennox RFCIV system involves matching the evaporator coil with the proper bore size in the orifice (primary and secondary) within the metering device. because the RFCIV system equalizes pressure almost instantaneously after the compressor stops, the unit starts unloaded, eliminating the need for any additional controls.

### Typical Applications



## SPECIFICATIONS

Model Number		C24-21FC-RFC	C24-26FC-RFC	C24-26WFC-RFC	C24-31FC-RFC	C24-31WFC-RFC
Evaporator Coil	Net face area — sq. ft. (m <sup>2</sup> )	3.11 (0.29)	3.11 (0.29)	3.11 (0.29)	3.56 (0.33)	3.56 (0.33)
	Tube diameter — in. (mm)	3/8 (9.5)	3/8 (9.5)	3/8 (9.5)	3/8 (9.5)	3/8 (9.5)
	Number of rows	1	2	2	2	2
	Fins per inch (m)	20 (787)	14 (551)	14 (551)	13 (512)	13 (512)
Suction line connection — in. (mm) sweat		5/8 (15.9)	5/8 (15.9)	5/8 (15.9)	3/4 (19)	3/4 (19)
Liquid line connection — in. (mm) sweat		3/8 (9.5)	3/8 (9.5)	3/8 (9.5)	3/8 (9.5)	3/8 (9.5)
Condensate drain (fpt) — in. (mm)		(2) 3/4 (19)	(2) 3/4 (19)	(2) 3/4 (19)	(2) 3/4 (19)	(2) 3/4 (19)
Refrigerant		R-22	R-22	R-22	R-22	R-22
*Expansion Device Furnished		RFCIV Metering Orifice				

\*Furnished and factory installed.


## SPECIFICATIONS

Model Number		C24-41FC-RFC	C24-41WFC-RFC	C24-46FC-RFC	C24-51FC-RFC	C24-65FC-RFC
Evaporator Coil	Net face area — sq. ft. (m <sup>2</sup> )	4.00 (0.37)	4.00 (0.37)	4.89 (0.45)	6.13 (0.57)	7.58 (0.70)
	Tube diameter — in. (mm)	3/8 (9.5)	3/8 (9.5)	3/8 (9.5)	3/8 (9.5)	3/8 (9.5)
	Number of rows	2	2	2	2	2
	Fins per inch (m)	13 (512)	13 (512)	14 (551)	13 (512)	13 (512)
Suction line connection — in. (mm) sweat		3/4 (19)	3/4 (19)	7/8 (22.2)	7/8 (22.2)	1-1/8 (28.6)
Liquid line connection — in. (mm) sweat		3/8 (9.5)	3/8 (9.5)	3/8 (9.5)	3/8 (9.5)	3/8 (9.5)
Condensate drain (fpt) — in. (mm)		(2) 3/4	(2) 3/4	(2) 3/4	(2) 3/4	(2) 3/4
Refrigerant		R-22	R-22	R-22	R-22	R-22
Coil shipping weight — lbs. (kg) 1 pkg		46 (21)	57 (26)	65 (29)	70 (32)	86 (39)
*Expansion Device Furnished		RFCIV Metering Orifice				


\*Furnished and factory installed.


## FULL CASED COIL TO FURNACE SELECTOR


Furnace Model Number		Coil Model Number									
		C24-21FC	C24-26FC	C24-26WFC	C24-31FC	C24-31WFC	C24-41FC	C24-41WFC	C24-46FC	C24-51FC	C24-65FC
G12	Q3-82			X		X		X	X	X	
	Q3-110		X		X		X			X	X
	Q5-137						X	X			
	Q5-165								X		X
G21	Q3-40		X		X		X			X	
	Q3-60		X		X		X			X	
	Q3-80		X		X		X			X	
	Q5-80								X		
	Q5-100								X		
G24M	2-45			X		X		X			
	2-60			X		X		X			
	3-60			X		X		X	X		
	2-75			X		X		X			
	3-75			X		X		X	X		
	4-75			X		X		X	X		X
	3/4-100		X		X		X			X	X
	4/5-100									X	X
	3/4-120		X		X		X			X	X
	4/5-120									X	X
4/5-140								X	X	X	

 Coil matches furnace and air volume.

 Coil matches furnace physically. Check furnace air volume and total system pressure drop for satisfactory match with coil.

 Coil matches air volume. Coil does not match furnace physically and requires field fabricated transition.

 Coil does not match furnace physically and requires field fabricated transition. Check furnace air volume and total system pressure drop for satisfactory match with coil.

 Does not Match

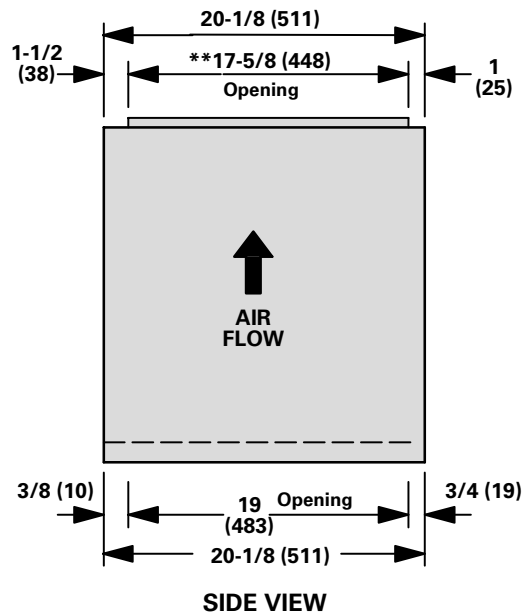
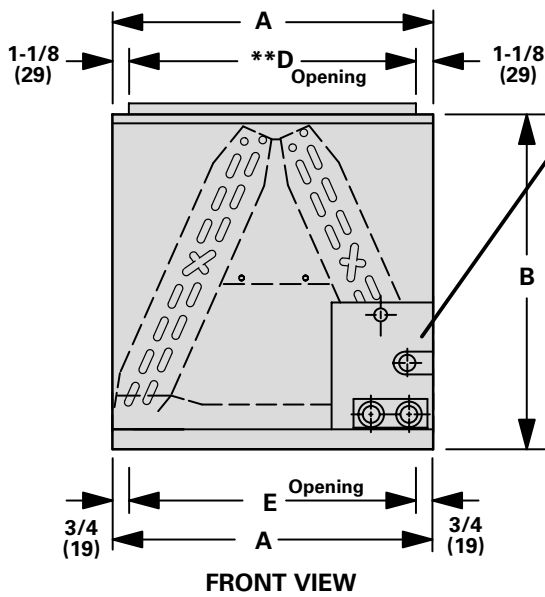
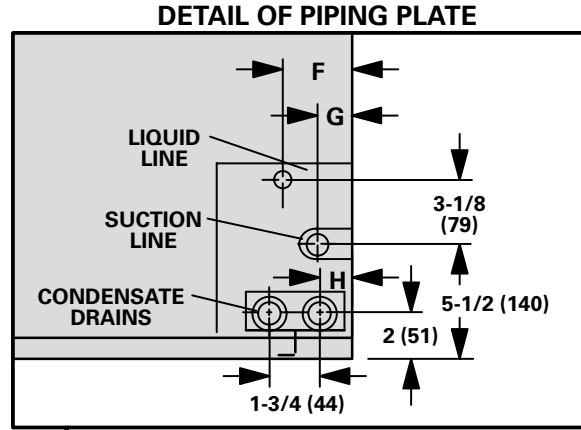
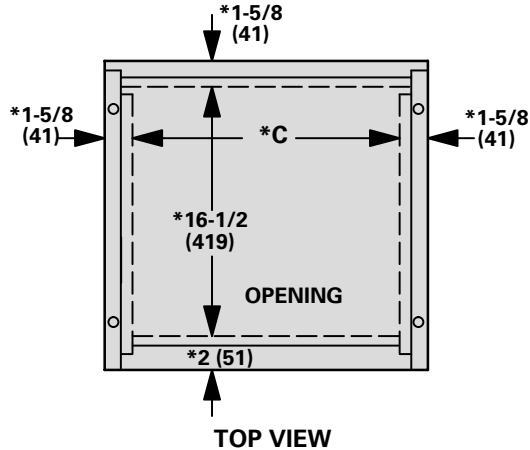
**AIR RESISTANCE**

Model Number	Air Volume		Total Resistance	
	cfm	L/s	in. w.g.	Pa
C24-21FC	300	140	.02	5
	400	190	.03	7
	500	235	.05	12
	600	285	.07	17
	700	330	.10	25
C24-26FC	400	190	.04	10
	600	285	.09	22
	800	380	.15	37
	1000	470	.23	57
	1200	570	.32	80
C24-26WFC	400	190	.04	10
	600	285	.09	22
	800	380	.15	37
	1000	470	.23	57
	1200	570	.32	80
C24-31FC	600	285	.07	17
	800	380	.12	30
	1000	470	.18	45
	1200	570	.25	62
	1400	660	.34	85
C24-31WFC	600	285	.07	17
	800	380	.12	30
	1000	470	.18	45
	1200	570	.25	62
	1400	660	.34	85
C24-41FC	800	380	.12	30
	1000	470	.19	47
	1200	570	.26	65
	1400	660	.35	87
	1600	760	.44	109

Model Number	Air Volume		Total Resistance	
	cfm	L/s	in. w.g.	Pa
C24-41WFC	800	380	.12	30
	1000	470	.19	47
	1200	570	.26	65
	1400	660	.35	87
	1600	760	.44	109
C24-46FC	1000	470	.12	30
	1200	570	.16	40
	1400	660	.22	55
	1600	760	.28	70
C24-46FC	1800	850	.34	85
	1200	570	.09	22
	1400	660	.12	30
	1600	760	.15	37
	1800	850	.19	47
C24-51FC	2000	940	.23	57
	2200	1040	.27	67
	1600	760	.11	27
C24-65FC	1800	850	.14	35
	2000	940	.17	42
	2200	1040	.20	50
	2400	1130	.23	57

**DIMENSIONS – inches (mm)**

**NOTE** – Coil cabinet is equipped with a 5/8 inch (16mm) flange that may be bent up 90° for plenum connection on conventional up-flo furnace applications.  
 \*Dimensions before flange is bent up.  
 \*\*Dimensions after flange is bent up.



Model Number	A		B		C		D		E		F		G		H	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
C24-21FC C24-26FC	16-1/4	413	17	432	13	330	14	356	14-3/4	375	4-1/8	105	2-1/8	54	1-7/8	48
C24-31FC C24-41FC	16-1/4	413	21	533	13	330	14	356	14-3/4	375	4-1/8	105	2-1/8	54	1-7/8	48
C24-26WFC C24-31WFC C24-41WFC	21-1/4	540	21	533	18	457	19	483	19-3/4	502	4-1/8	105	2-1/8	54	1-7/8	48
C24-46FC	21-1/4	540	25-3/4	654	18	457	19	483	19-3/4	502	4-1/8	105	2-1/8	54	1-7/8	48
C24-51FC	26-1/4	667	25-3/4	654	23	584	24	610	24-3/4	629	4-1/8	105	2-1/8	54	1-7/8	48
C24-65FC	26-1/4	667	28-3/4	730	23	584	24	610	24-3/4	629	4-1/8	105	2-1/8	54	1-7/8	48